Exhibit A

IFW

PATENT
Attorney Docket No.: AVARS-02700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Group Art Unit: 2661
Mansour J. Karam et al.	Examiner:
Serial No.: 10/070,338	**TRANSMITTAL LETTER**
Filed: December 12, 2002	162 N. Wolfe Road Sunnyvale, CA 94086
For: **METHOD AND APPARATUS FOR CHARACTERIZING THE QUALITY OF NETWORK PATH**	(408) 530-9700 Customer No.: 28960

MS: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Sir:

Enclosed please find a Supplemental Information Disclosure Statement, and Form PTO-1449, including copies of the references contained thereon, for filing in the U.S. Patent and Trademark Office.

You will also find enclosed the associated Transmittals, Electronic Information Disclosure Statements, and United States Patent and Trademark Office Acknowledgment Receipts for the electronically filed Information Disclosure Statement (EFS ID #80866) and (EFS ID #80868) filed on March 25, 2005.

The Commissioner is hereby authorized to charge any additional fee or credit overpayment to our Deposit Account No. 08-1275. **An originally executed duplicate of this transmittal is enclosed for this purpose.**

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 3-25-05

By: Thomas B. Haverstock
Thomas B. Haverstock
Reg. No.: 32,571

Attorneys for Applicants

CERTIFICATE OF MAILING (37 CFR§ 1.8(a))

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

HAVERSTOCK & OWENS LLP

Date: 3-25-05 By:

PATENT
Attorney Docket No.: AVARS-02700

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HAVERSTOCK & OWENS LLP.

Date: 3-25-05 By _____

PATENT
Attorney Docket No.: AVARS-02700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Group Art Unit: 2661
Mansour J. Karam et al.	Examiner:
Serial No.: 10/070,338	**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**
Filed: December 12, 2002	
For: **METHOD AND APPARATUS FOR CHARACTERIZING THE QUALITY OF NETWORK PATH**	162 N. Wolfe Road Sunnyvale, CA 94086 (408) 530-9700

MS: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The citations listed below, copies attached, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

United States Patents or Published Patent Applications have been filed electronically (EFS ID #80866) and (EFS ID #80868). Applicants have become aware of the following printed publication which may be material to the examination of this application:

- European Publication No. EP 0 504 537 A1;
- European Publication No. EP 0 528 075 A1;
- European Publication No. EP 0 598 969 B1;
- European Publication No. EP 0 788 267 A2;
- European Publication No. EP 0 942 560 A2;
- European Publication No. EP 0 977 456 A2;
- European Publication No. EP 0 982 901 A1;
- European Publication No. EP 0 999 674 A1;
- PCT Publication No. WO 94/08415;
- PCT Publication No. WO 99/06913;

- PCT Publication No. WO 99/14907;
- PCT Publication No. WO 99/14931;
- PCT Publication No. WO 99/14932;
- PCT Publication No. WO 99/18751;
- PCT Publication No. WO 99/30460;
- PCT Publication No. WO 99/39481;
- PCT Publication No. WO 00/04458;
- PCT Publication No. WO 00/25224;
- PCT Publication No. WO 00/38381;
- PCT Publication No. WO 00/45560;
- PCT Publication No. WO 00/52906;
- PCT Publication No. WO 00/62489;
- PCT Publication No. WO 00/72528 A1;
- PCT Publication No. WO 00/79362 A2;
- PCT Publication No. WO 00/79730 A2;
- PCT Publication No. WO 01/06717 A1;
- PCT Publication No. WO 01/13585 A1;
- Z. Wang et al., "Resource Allocation for Elastic Traffic: Architecture and Mechanisms," Conference Proceedings Article, 2000, XP010376681, pages 159-169;
- C. V. Papadopoulos et al., "Protection and Routing Algorithms for Network Management -The Case of Transmission Networks," Microprocessing and Microprogramming 38 (1993), XP000383771, pages 163-170;
- J. Yu, "Scalable Routing Design Principles," Ref. No. RFC 2791, Network Working Group, July 31, 2000, pages 1-26;
- Paul Francis et al., "An Architecture for a Global Internet Host Distance Estimation Service," pages 1-17;
- T. Bates et al., "Multiprotocol Extensions for BGP-4", XP-00219077, June 2000, ppg. 1-10;
- S. Kumar et al., "The MASC/BGMP Architecture for Inter-domain Multicast Routing," 12 pages;
- S. Berson et al., "An Architecture for Advance Reservations in the Internet," USC Information Sciences Institute, July 16, 1998, pages 1-21;

- R. P. Draves et al., "Constructing Optimal IP Routing Tables," 1999 IEEE, 1-10;
- R. Govindan et al., "An Analysis of Internet Inter-Domain Topology and Route Stability," USC Information Sciences Institute, 1997 IEEE, 8 pages;
- V. Paxson, "Toward a Framework for Defining Internet Performance Metrics," http://www.isoc.org/inet96/proceedings/d3/d3_3.htm, pages 1-20;
- C. Alaettinoglu et al. "Routing Policy Specification Language (RPSL)," http://quimby.gnus.org/internet-drafts/draft-ietf-rps-rpsl-v2-00.txt, pages 1-56;
- P. Traina, "BGP-4 Protocol Analysis," March 1995, pages 1-10;
- B. Krishnamurthy et al., "On Network-Aware Clustering of Web Clients," 14 pages;
- Sami Iren et al., "The Transport Layer: Tutorial and Survey", XP-002210446, ACM Computing Surveys, Vol. 31, No. 4, December 1999, pages. 360-405; and
- D. B. Ingham et al., "Supporting Highly Manageable Web Services", Computer Networks and ISDN Systems 29 (1997), pages. 1405-1416.

This Supplemental Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that anyone or more of these citations constitutes prior art.

Respectfully submitted,
HAVERSTOCK & OWENS LLP

Dated: 3-25-05

By: Thomas B. Haverstock
Reg. No.: 32,571

Attorneys for Applicants

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HAVERSTOCK & OWENS LLP

Date: 3-25-05 By:

FORM PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.: AVARS-02700	Serial No.: 10/070,338
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)		Applicants: Mansour J. Karam et al.	
(37 CFR § 1.98(b))		Filing Date: December 12, 2002	Group Art Unit: 2661

FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation Yes	Translation No
	AA	EP 0 504 537 A1	09/23/92	EP	H04L	12/26		X
	AB	EP 0 528 075 A1	02/24/93	EP	H04L	12/26		X
	AC	EP 0 598 969 B1	02/10/99	EP	H04L	12/18		X
	AD	EP 0 788 267 A2	08/06/97	EP	H04L	29/06		X
	AE	EP 0 942 560 A2	09/15/99	EP	H04L	12/64		X
	AF	EP 0 977 456 A2	02/02/00	EP	H04Q	11/04		X
	AG	EP 0 982 901 A1	01/03/00	EP	H04L	12/56		X
	AH	EP 0 999 674 A1	04/28/04	EP	H04L	12/64		X
	AI	WO 94/08415	04/14/94	PCT	H04L	12/66		X
	AJ	WO 99/06913	02/11/99	PCT	G06F	13/00		X
	AK	WO 99/14907	03/25/99	PCT	H04L	12/56		X
	AL	WO 99/14931	03/25/99	PCT	H04M	7/00		X
	AM	WO 99/14932	03/25/99	PCT	H04M	7/00		X
	AN	WO 99/18751	04/15/99	PCT	H04Q	11/04		X
	AO	WO 99/30460	06/17/99	PCT	H04L	12/00		X
	AP	WO 99/39481	08/05/99	PCT	H04L	12/66		X
	AQ	WO 00/04458	01/27/00	PCT	G06F	17/21		X
	AR	WO 00/25224	05/04/00	PCT	G06F	13/00		X
	AS	WO 00/38381	06/29/00	PCT	H04L	12/56		X
	AT	WO 00/45560	08/03/00	PCT	H04L	29/00		X
	AU	WO 00/52906	09/08/00	PCT	H04L	29/06		X
	AV	WO 00/62489	10/19/00	PCT	H04L	12/56		X
	AW	WO 00/72528 A1	11/30/00	PCT	H04L	12/56		X
	AX	WO 00/79362 A2	12/28/00	PCT	G06F			X
	AY	WO 00/79730 A2	12/28/00	PCT	H04L	12/00		X
	AZ	WO 01/06717 A1	01/25/01	PCT	H04L	12/56		X
	BA	WO 01/13585 A1	02/22/01	PCT	H04L	12/46		X
	BB							

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

	BC	Z. Wang et al., "Resource Allocation for Elastic Traffic: Architecture and Mechanisms," Conference Proceedings Article, 2000, XP010376681, pages 159-169.
	BD	C. V. Papadopoulos et al., "Protection and Routing Algorithms for Network Management -The Case of Transmission Networks," Microprocessing and Microprogramming 38 (1993), XP000383771, pages 163-170.
	BE	J. Yu, "Scalable Routing Design Principles," Ref. No. RFC 2791, Network Working Group, July 31, 2000, pages 1-26.
	BF	Paul Francis et al., "An Architecture for a Global Internet Host Distance Estimation Service," pages 1-17.
	BG	T. Bates et al., "Multiprotocol Extensions for BGP-4", XP-00219077, June 2000, ppg. 1-10.

Examiner:		Date Considered:
EXAMINER:	Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

FORM PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.: AVARS-02700	Serial No.: 10/070,338
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets if Necessary)		Applicants: Mansour J. Karam et al.	
(37 CFR § 1.98(b))		Filing Date: December 12, 2002	Group Art Unit: 2661

		OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)
	BH	S. Kumar et al., "The MASC/BGMP Architecture for Inter-domain Multicast Routing," 12 pages.
	BI	S. Berson et al., "An Architecture for Advance Reservations in the Internet," USC Information Sciences Institute, July 16, 1998, pages 1-21.
	BJ	R. P. Draves et al., "Constructing Optimal IP Routing Tables," 1999 IEEE, 1-10.
	BK	R. Govindan et al., "An Analysis of Internet Inter-Domain Topology and Route Stability," USC Information Sciences Institute, 1997 IEEE, 8 pages.
	BL	V. Paxson, "Toward a Framework for Defining Internet Performance Metrics," http://www.isoc.org/inet96/proceedings/d3/d3_3.htm, pages 1-20.
	BM	C. Alaettinoglu et al. "Routing Policy Specification Language (RPSL)," http://quimby.gnus.org/internet-drafts/draft-ietf-rps-rpsl-v2-00.txt, pages 1-56.
	BN	P. Traina, "BGP-4 Protocol Analysis," March 1995, pages 1-10.
	BO	B. Krishnamurthy et al., "On Network-Aware Clustering of Web Clients," 14 pages.
	BP	Sami Iren et al., "The Transport Layer: Tutorial and Survey", XP-002210446, ACM Computing Surveys, Vol. 31, No. 4, December 1999, pages. 360-405.
	BQ	D. B. Ingham et al., "Supporting Highly Manageable Web Services", Computer Networks and ISDN Systems 29 (1997), pages. 1405-1416.
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Examiner:	Date Considered:

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Exhibit B

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,338	12/12/2002	Mansour J. Karam	24717-718	2450

28960 7590 06/27/2006

HAVERSTOCK & OWENS LLP
162 NORTH WOLFE ROAD
SUNNYVALE, CA 94086

EXAMINER	
BENGZON, GREG C	
ART UNIT	PAPER NUMBER
2144	

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/070,338	KARAM ET AL.	
	Examiner	Art Unit	
	Greg Bengzon	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This application has been examined. Claims 1-47 are pending.

Priority

This application claims benefits of priority from Provisional Application 60/241450 filed October 17, 2000.

The effective date of the claims described in this application is October 17, 2000.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 05/15/2006, 03/02/2006, 01/30/2006, 07/25/2005, 06/10/2005, 03/28/2005, 03/25/2005, 03/25/2005, 12/17/2002, are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the 'first segment and second segment' as recited in Claims 1 and 24 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

Claims 1-47 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 24 recite 'a first segment and a second segment'. There is insufficient guidance from the Applicant Specifications regarding said segment, such that one of ordinary skill in the art would not be able to ascertain what a segment is.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> **The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

Claims 1-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 24 recite 'adding the first metric and the second metric to generate a third metric, wherein the third metric is at least partly the function of the same plurality of one or more elementary network parameters of the network path'. There is no support from the Applicant Specifications regarding said addition of first and second metric, wherein the result is a third metric of the same network parameter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 17,24-27, 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Shavitt (US Patent 7065584).

The Examiner notes that distance and delay are used interchangeably in the Shavitt disclosure. (Shavitt-Column 5 Lines 6-7)

Shavitt disclosed (re. Claim 1) a network path, including a first segment and a second segment (Shavitt-Column 2 Lines 35-40, Column 5 Lines 15-20)

accessing a first metric and a second metric (Shavitt-Column 5 Lines 35-45, Column 5 Lines 65) , wherein the first metric and the second metric are at least in part quality characterizations of a same plurality of one or more network applications (Shavitt-Column 1 Lines 60-65), the quality characterization characterizes a quality of the same plurality of one or more network applications running at one or more segment end-points (Shavitt-Column 1 Lines 67 – 'tracer stations'), the first metric and the second metric are at least partly a function of a same plurality of one or more elementary network parameters (Shavitt- Column 2 Lines 50-60), the plurality of one or more network parameters include one or more of delay (Shavitt- Column 2 Lines 20-25, Column 5 Lines 5-10), jitter, loss, currently available bandwidth, and intrinsic bandwidth, the first metric is at least partly the function of the same plurality of elementary network parameters of the first segment (Shavitt-Column 6 Lines 20-35) , the one or more segment end

points include one or more endpoints of the first segment, the second metric (Shavitt-Column 6 Lines 20-35) is at least partly the function of the same plurality of elementary network parameters (Shavitt-Column 5 Lines 5-10 – 'delay') of the second segment, and the one or more segment end points include one or more endpoints of the second segment; and

adding the first metric and the second metric to generate a third metric (Shavitt-Column 6 Lines 20-35), wherein the third metric is at least partly the function of the same plurality of one or more elementary network parameters of the network path, the one or more segment end points include one or more endpoints of the network path, and

the third metric is a quality characterization of the same plurality of one or more applications.

Shavitt disclosed (re. Claim 2) prior to accessing the first or the second metric, generating at least one of the first metric and the second metric (Shavitt-Column 5 Lines 20-25)

Shavitt disclosed (re. Claim 3) prior to accessing the first or the second metric, receiving at least one of the first metric and the second metric. (Shavitt-Column 5 Lines 20-25)

Shavitt disclosed (re. Claim 4) wherein at least one of the plurality of one or more network parameters is dynamic.(Shavitt-Column 5 Lines 1-5)

Shavitt disclosed (re. Claim 17) a delay parameter. (Shavitt-Column 5 Lines 6-7)

Claims 24-27, 40 are rejected on the same basis as Claims 1-4, 17.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-16, 18-21, 28-39, 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shavitt (US Patent 7065584) in view of what was well-known in the art.

Shavitt did not disclose (re. Claim 5) wherein at least one of the plurality of one or more network parameters is static. However, Shavitt disclosed where the network parameters are dynamic. At the time of the invention it would have been well-known in the art that where Shavitt disclosed delay as a function of distance, where the distance may be quasi-static, then the delay parameter will be static as well. At the time of the invention it would have been obvious to

combine what was well known in the art with Shavitt regarding such static network parameters. The motivation for said combination would have been to reduce the complexity of the solution required to characterize the network path (Shavitt-Column 8 Lines 40-45).

Shavitt did not disclose (re. Claim 6,7,11) UDP and TCP applications; (re. Claim 8,9,10) network applications including voice, video, and video conferencing; (re. Claims 15) ftp applications; (re. Claim 16) telnet applications.

At the time of the invention it would have been well-known in the art that Internet applications (Shavitt-Column 1 Lines 60-65) would encompass network applications including UDP, TCP, voice, video, video conferencing, ftp applications, and telnet applications. At the time of the invention it would have been obvious to combine what was well known in the art with Shavitt regarding such network applications. The motivation for said combination would have been to allow for measurement of all Internet applications and not just some Internet applications for maximum benefit Shavitt measurements.

Shavitt did not disclose (re. Claim 12,13,14) HTTP, HTTP/1.0, and HTTP/1.1 applications.

At the time of the invention it would have been well-known in the art that applications based on an HTTP/web server (Shavitt-Column 1 Lines 50-55) would encompass network applications including HTTP, HTTP/1.0, and HTTP/1.1 applications. At the time of the invention it would have been obvious to combine what was well known in the art with Shavitt regarding such network applications. The motivation for said combination would have been to allow for measurement of all Internet applications and not just some Internet applications for maximum benefit from the Shavitt measurements.

Shavitt did not disclose (re. Claim 18) wherein the plurality of one or more network parameters include jitter; (re. Claim 19) wherein the plurality of one or more network parameters include loss; (re. Claim 20) wherein the plurality of one or more network parameters include currently available bandwidth; (re. Claim 21) wherein the plurality of one or more network parameters include intrinsic bandwidth;

At the time of the invention it would have been well-known in the art that jitter, loss, currently available bandwidth, and intrinsic bandwidth are measurements taken to describe path quality. It would have also been well-known in the art that any performance criteria susceptible to characterization in

the same manner as delay (i.e. where all criteria have a common unit of measure) may be used to provide a sum of measurements or be incorporated into a linear equation describing the path characteristics. (See Roginsky , US Patent 6034946, Column 15 Lines 30-35).

At the time of the invention it would have been obvious to combine what was well-known in the art with Shavitt regarding use of other performance criteria. The motivation for said combination would have been to allow for Shavitt to consider all factors affecting the path selection for improved load balancing (Shavitt-Column 1 Lines 20-25).

Claims 28-39, 41-44 are rejected on the same basis as Claims 5-16, 18-21.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

Claims 22-23, 45-46, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shavitt (US Patent 7065584) in view of Saleh (US Patent 7002917).

Shavitt did not disclose (re. Claim 22) wherein the metric includes non-performance related characteristics; (re. Claim 23) wherein the non-performance related characteristics includes pre-specified route preferences.

Saleh disclosed (re. Claim 22) wherein the metric includes non-performance related characteristics (Saleh-Column 5 Lines 25-30, Column 33 Lines 35-40); (re. Claim 23) wherein the non-performance related characteristics includes pre-specified route preferences. (Saleh-Column 5 Lines 25-30, Column 33 Lines 35-40)

Shavitt and Saleh are analogous art because they present concepts and practices regarding path characterization measurements. At the time of the invention it would have been obvious to combine Saleh into Shavitt. The motivation for said combination would have been, as Saleh suggests (Saleh-Column 2 Lines 15-20), to implement a fast, efficient method for the most preferable path.

While Shavitt disclosed (re. Claim 47) first, second, and third metric, Shavitt did not disclose (re. Claim 47) a plurality of one or more inputs adapted to be coupled to the network path; and a plurality of one or more outputs coupled to the plurality of one or more inputs, wherein responsive to a plurality of one or

more packets arriving to the network device through the plurality of one or more inputs, the network device selects at least one output from the plurality of one or more outputs, and the at least one output is determined at least partly using at least one of the first metric, second metric, and third metric.

Saleh disclosed (re. Claim 47) a path matrix configuration (Saleh-Column 23 Lines 1-5) and adding the metric from each segment (corresponding to first metric, second metric, and third metric) (Column 33 Lines 35-40) in order to select the desired path (Column 32 Lines 50-55).

Shavitt and Saleh are analogous art because they present concepts and practices regarding path characterization measurements. At the time of the invention it would have been obvious to combine Saleh into Shavitt. The motivation for said combination would have been, as Saleh suggests (Saleh-Column 2 Lines 15-20), to implement a fast, efficient method for the most preferable path.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other

passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the enclosed PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Bengzon whose telephone number is (571) 272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gcb

WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets if Necessary)		Applicants: Mansour J. Karam et al.	
(37 CFR § 1.98(b))		Filing Date: December 12, 2002	Group Art Unit: 2661

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

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	BI	S. Berson et al., "An Architecture for Advance Reservations in the Internet," USC Information Sciences Institute, July 16, 1998, pages 1-21.
	BJ	R. P. Draves et al., "Constructing Optimal IP Routing Tables," 1999 IEEE, 1-10.
✓	BK	R. Govindan et al., "An Analysis of Internet Inter-Domain Topology and Route Stability," USC Information Sciences Institute, 1997 IEEE, 8 pages.
	BL	V. Paxson, "Toward a Framework for Defining Internet Performance Metrics," http://www.isoc.org/inet96/proceedings/d3/d3_3.htm, pages 1-20.
	BM	C. Alaettinoglu et al. "Routing Policy Specification Language (RPSL)," http://quimby.gnus.org/internet-drafts/draft-ietf-rps-rpsl-v2-00.txt, pages 1-56.
	BN	P. Traina, "BGP-4 Protocol Analysis," March 1995, pages 1-10.
	BO	B. Krishnamurthy et al., "On Network-Aware Clustering of Web Clients," 14 pages.
	BP	Sami Iren et al., "The Transport Layer: Tutorial and Survey", XP-002210446, ACM Computing Surveys, Vol. 31, No. 4, December 1999, pages. 360-405.
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Examiner: [signature] Date Considered: 6/23/2006

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.